What Is claimed is:

1. A control device for controlling the optical data transmission in optical burst switching mode between a source computer and a destination computer,

the control device being

- connected to the source computer and to the destination computer;
- adapted such that in case of a burst to be transmitted from the source computer to the destination computer, the length of the burst is determined based on
  - a parameter indicating an available buffer size of the destination computer; and
  - a predetermined timeout value parameter indicating a time after which improper burst transmission is assumed to have been occurred.

2. The control device according to claim 1,

which is adapted such that the length of the burst is determined further based on an initial window size indicating a number of data packets which the source computer is able to send before waiting for an acknowledgement.

3. The control device according to claim 1 or 2,

which is adapted such that the length of the burst is determined further based on a packet size indicating the size of data packets which the source computer is able to send.

4. The control device according to any of claims 1 to 3,

which is adapted such that the length of the burst is determined further based on a round trip time of the burst transmission.

5. The control device according to any of claims 1 to 4,

which is adapted such that the length of the burst is determined further based on a peak service rate which the destination computer is able to service.

6. The control device according to any of claims 1 to 5,
which is adapted such that the length of the burst is determined in dependence of a minimum of the parameter indicating an available buffer size of the destination computer and of the predetermined timeout value parameter indicating a time after which improper burst transmission is assumed to have been occurred.

7. The control device according to any of claims 1 to 6,
which is adapted such that data to be transmitted is accumulated in the source computer until the size of the data to be transmitted generally equals the determined length of the burst to be transmitted.

8. The control device according to any of claims 1 to 7,
which is adapted such that, based on the determined length of the burst to be transmitted, resources for transmitting the burst are reserved and the burst is transmitted.

9. The control device according to claim 8,
which is adapted such that the reservation and transmission is realized using an optical burst switch network.

10. The control device according to claim 9,
which is adapted such that the optical burst switch network comprises means for sending a control packet followed by the burst after a predetermined offset time.

11. The control device according to claim 9 or 10,
which is adapted such that the optical burst switch network comprises means for sending a reservation confirmation packet indicating that reservation has been performed.

12. The control device according to claim 8,
which is adapted such that the reservation and transmission is realized by dividing, in the time domain, a burst to be transmitted into a plurality of burst slices.

13. The control device according to any of claims 1 to 12,
which is adapted such that, in case of a predetermined data path for transmission of the burst, at least one intermediate computer located in the data path between the source computer and the destination computer is implemented as a cache storage computer for temporarily storing data related to the transmitted burst.

14. The control device according to any of claims 1 to 13,
which is adapted such that once the length of the burst is determined, a burst reservation and transmission is performed based on a random burst eligibility time method, to deliver the optical burst.

15. The control device according to claim 14,
which is adapted such that a time between the time to prepare a minimum burst and the time to prepare a full pre-determined burst is randomly picked up as a burst eligibility time.

16. A shared storage network system,
comprising a control device according to any of claims 1 to 15 for controlling the optical data transmission in an optical burst switching mode between one of at least one storage server each providing a storage portion to the shared storage network system and one of at least one storage client adapted to have read and/or write access to at least one storage portion of at least one of the at least one storage server, the storage server and the storage client being the source computer and the destination computer.

17. The shared storage network system according to claim 16,
wherein

- the at least one storage server is located within a first local area network;
- the at least one storage client is located within a second local area network, the first local area network and the second local area network being interconnected to form a global network;
- the at least one storage server and the at least one storage client are interconnected such that in case of a read or a write access of one of the at least one storage client to one of the at least one storage server, the length of a burst to be transmitted

according to the read or write access is determined based on

- the parameter indicating an available buffer size of the storage server or the storage client, which storage server or storage client is the destination computer of the burst transmission associated with the read or write access; and
- the predetermined timeout value parameter indicating a time after which improper burst transmission is assumed to have been occurred.

18. The shared storage network system according to claim 17, wherein the first local area network further comprises at least one of said at least storage client and/or the second local area network further comprises at least one of the at least one storage server.

19. The shared storage network system according to any of claims 16 to 18, comprising at least one further local area network comprising at least one storage server and/or at least one storage client, the at least one further local area network being interconnected to the global network.

20. The shared storage network system according to any of claims 16 to 19, wherein at least one of the local area networks comprises a linking computer being interconnected as a link between the at least one storage server and/or the at least one storage client of the local area network associated with the linking computer on the one hand and the remaining local area network or networks on the other hand.

21. The shared storage network system according to any of claims 16 to 20, wherein at least one of the local area networks is an optical network or a wired network.

22. The shared storage network system according to any of claims 16 to 21, which is adapted to operate based on the Storage Networking Industry Association standard.

23. The shared storage network system according claim 22, which is adapted to operate on the second layer of the Storage Networking Industry Association standard.

24. The shared storage network system according to any of claims 16 to 23,
which is adapted such that the entirety of all of the storage portions of the at least one storage server form a global block address space.

25. A method for controlling the optical data transmission in an optical burst switching mode between a source computer and a destination computer,
comprising the steps of

- connecting the source computer to the destination computer;
- in case of a burst to be transmitted from the source computer to the destination computer, determining the length of the burst based on
  - a parameter indicating an available buffer size of the destination computer; and
  - a predetermined timeout value parameter indicating a time after which improper burst transmission is assumed to have been occurred.